



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/687,263 | 10/12/2000 | Chok J. Chia | 00-282 | 1361 |

24319 7590 06/05/2002

LSI Logic Corporation
1551 McCarthy Blvd.
M/S: D-106 Patent Department
Milpitas, CA 95035

EXAMINER

COLLINS, DEVEN M

ART UNIT PAPER NUMBER

2823

DATE MAILED: 06/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/687,263

Applicant(s)

CHIA ET AL.

Examiner

D. M. Collins

Art Unit

2823

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 6-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit: 2823

DETAILED ACTION

Election/Restriction

1. Applicant's election of Group I, claims 1-5 in Paper No. 5 is acknowledged. The traversal is on the ground(s) that the fields of search for the Group I and II inventions are co-extensive. Since both inventions are classified in two distinct classes, the examination of both inventions does indeed constitute a burden on the examiner.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manteghi (6,046,075, dated 4/4/00) in view of Marrs (5,795,818, dated 8/18/98).

Art Unit: 2823

Manteghi shows the method as claimed in the Figure 3 with corresponding text. In re claim 1, Manteghi discloses a method for insulating a bonding wire 16 comprising the following steps:

- (a) attaching a bonding wire 16 to a bond pad 18; and
- (b) coating 25 the bonding wire 16 with an insulating liquid while drawing the bonding wire 16 through a bond tool from the bond pad 18 to a package lead 24.

However, Marrs discloses a method for forming an interconnection between bonding pads 204 on an integrated circuit chip 201 and corresponding bonding contacts 501c on a substrate 501 where an encapsulant of Fig. 1, formed by injection molding or transfer molding, encloses a chip 201. (col. 10, line 65)

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Manteghi in view of Marrs to include an insulating medium for bonding wire in microelectronic packaging.

In re claim 2, Manteghi in view of Marrs discloses the method of claim 1 further comprising after step (b) the step of ceasing to coat 25 the bonding wire 16 with the insulating liquid.

Art Unit: 2823

In re claim 3, Manteghi in view of Marrs discloses the method of claim 1 further comprising after step (b) the step of attaching the bonding wire 16 to the package lead 24.

In re claim 4, Manteghi in view of Marrs discloses the method of claim 1 further comprising after step (b) the step of solidifying the insulating liquid coating 25 the bonding wire 16.

In re claim 5, Manteghi in view of Marrs discloses the method of claim 4 wherein the step of solidifying the insulating liquid comprises one of heating the bonding wire 16 and exposing the bonding wire 16 to ultraviolet radiation.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Deven M. Collins whose telephone number is (703) 305-7840.

The examiner can normally be reached on Monday-Friday from 6:30 AM to 3:00 PM.

Serial Number: 09/687263

Page 5

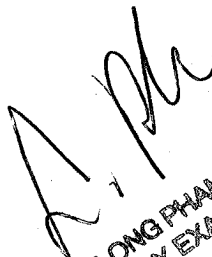
Art Unit: 2823

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy, can be reached on (703) 308-4918. The fax phone number for this Group is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

DMC

April 8, 2002


LONG PHAM
PRIMARY EXAMINER